

Amendments to the Specification

Please replace the abstract, with the following replacement abstract.

--A switching device having an IVR provisioning/monitoring system and an associated method to reprovision and/or monitor a switch. Audible sounds are detected and analyzed to determine [[if]] whether they are audibilized commands ~~which contains~~ containing reprovisioning instructions. If ~~an audible sound is determined to be an audibilized command containing reprovisioning instructions so~~, the switch is reprovisioned in accordance with the ~~reprovisioning~~ instruction. To determine [[if]] whether the detected audible sound is an audibilized command ~~containing reprovisioning instructions~~, the audible sound is digitized for comparison with plural recognizable commands. If the digitized audible sound matches ~~one of the recognizable commands~~ a recognized command, then the corresponding reprovisioning instruction[[s]] ~~contained in the digitized audible sound~~ is executed. Prior to ~~analyzing detected audible sounds to determine if they are audibilized commands containing the~~ reprovisioning ~~instructions~~ analysis, the detected audible sounds are first analyzed to determine [[if]] whether they are an authorization code. If ~~an authorization code is detected so~~, subsequent audible sounds are analyzed to determine [[if]] whether they ~~are audibilized commands containing~~ contain reprovisioning instructions. The ~~reprovisioning/monitoring~~ system may be further operated in a monitoring mode where events are ~~propagated~~ propagated to an expert system module for determining [[if]] whether an alert or ~~other~~ notification should be issued in response to the ~~detected~~ event.--

On page 14, line 15 – page 15, line 18, please replace the paragraph in its entirety to read:

--In addition to the otherwise unspecified HW and SW components 28 and 30, the components of the IXC switch 16-1 further include a processor subsystem 22 and a memory subsystem 23. It should be clearly understood that these terms are not meant to necessarily respectively represent a single discrete device within the IXC switch 16-1. More specifically, by the term “processor subsystem”, it is intended to refer to the collective processing capability within the IXC switch 16-1. Thus, it is fully contemplated that the processor subsystem 48 encompasses plural processing devices variously located within the IXC switch 16-1. As a

result, if various software modules or applications are described as residing on the processor subsystem 22, it should be clearly understood that the variously described software modules may, in fact, reside on separate processing devices. Similarly, by the term “memory subsystem”, it is intended to refer to the total available memory space within the IXC switch 16-1. As such, it is fully contemplated that the memory subsystem 23 encompasses the main, auxiliary, cache as well as any other type of memory device residing in the IXC switch 16-1. The processor and memory subsystems 22 and 23 are coupled together by a main system bus 25 configured to permit bi-directional exchanges of address, data and control signals therebetween. ~~As certain~~ Certain components and/or devices forming part of the processor subsystem 22 ~~and illustrated only in Fig. 2 handles (Fig. 2) handle~~ exchanges between the originating station ~~12 coupled 12—coupled~~ to the telecommunications network 10 via the originating switch ~~18 and 18—~~and either the terminating station ~~14 coupled 14—coupled~~ to the telecommunications network 10 via the terminating switch ~~20 or 20—~~or another terminating station (not ~~shown~~) ~~coupled shown—~~coupled to the telecommunications network 10 via the IXC switch 16-N, another IXC switch (not shown) or the internet protocol (or “IP”) network (also not ~~shown~~), shown). Fig. 1 shows the processor subsystem 22 as coupled to the originating switch 18, the terminating switch 20, the IXC switch 16-N, additional IXC switches and the IP network.--

On page 15, line 19 – page 16, line 12, please replace the paragraph in its entirety to read:

--Also residing on the IXC switch 16-1 and coupled to the processor subsystem 22 is an IVR controlled provisioning/monitoring system 34. As will be more fully described below, the IVR provisioning/monitoring system 34 performs plural functions for the IXC switch 16-1, including the reprovisioning of the IXC switch 16-1 in response to a series of audibilized commands spoken by a switch administrator and the issuing of alerts and/or initiation of corrective action in response to the detection of pre-determined operating conditions. To reprovision the IXC switch 16-1, the IVR provisioning/monitoring system is shown coupled to the processor subsystem 22 which, as more fully described below, executes the code which provisions the IXC switch 16-1. To collect data needed to determine whether an alert should be issued or corrective action initiated, the IVR provisioning/monitoring system 34 is coupled to the HW and SW components 28 and 30 for receipt of data needed to determine whether an alert

should be issued or corrective action initiated. As additional data needed to determine whether an alert should be issued or corrective action initiated is typically generated by call processing software executed by the processor subsystem 23 22, the IVR provisioning/monitoring system will also utilize the aforementioned coupling to the processor subsystem during monitoring operations as well.--

On page 18, line 22 – page 20, line 14, please replace the paragraph in its entirety to read:

--As previously mentioned, also residing within the IXC switch 16-1 is an IVR provisioning/monitoring system 34. The IVR provisioning/monitoring system 34 is comprised of one or more software modules 36, 38, 40 suitable for execution by a second processor subsystem (not shown) and one or more data tables 42, 44, 46 containing information maintained in respective areas of a second memory subsystem (also not shown) The processor subsystem executes the series of instructions forming the respective software modules 36, 38, 40 and, using data and/or instructions contained in the data tables 42, 44, 46, commands received from the switch administrator via human interface 47 and data received from the HW and SW components 28 and 30 (as well as the CALLP application 32) of the IXC switch 16-1, the IVR provisioning/monitoring system 34 performs plural functions for the IXC switch 16-1, including the reprovisioning of the IXC switch 16-1 in response to a series of audibilized commands spoken by the switch administrator and the issuing of alerts and/or initiation of corrective action in response to the detection of certain operating conditions previously determined to necessitate issuance of an alert or initiation of corrective action. As will be more fully described below, the provisioning/monitoring system 34 performs reprovisioning operations for the IXC switch 16-1 by generating reprovisioning commands in response to an IVR interchange with a switch administrator operating the human interface 47 and transmitting the generated reprovisioning commands to the interaction module 33 for execution. Thus, to perform reprovisioning operations, the voice recognition module 36 is further coupled to the interaction module 33. As a further part of the IVR interchange with the switch administrator, the provisioning/monitoring system 34 generates responses to audible commands received from the switch administrator. To generate responses, the voice generation module ~~30~~ 40 is coupled to the interaction module 33 to receive reply messages, generated by the interaction module 33, in response to the commands

issued thereto by the voice recognition module 36 and, using the received reply messages, generate responses for propagation to the switch administrator at the human interface 47. Preferably, the IVR provisioning/monitoring system 34 is a discrete device residing within the IXC switch 16-1 as shown in Figs. 1 and 2. It is fully contemplated that, in an alternate embodiment of the invention, the software portion of the IVR provisioning/monitoring system 34 may, like the CALLP application 32, reside within the call controller 31 or another part of the processor subsystem 22 of the IXC switch 16-1. Similarly, the data tables 42, 44, 46 of the IVR provisioning/monitoring system 34 may reside within the memory subsystem 23 of the IXC switch 16-1. It is further fully contemplated that the IVR provisioning/monitoring system 34 may be remotely located relative to the IXC switch 16-1. For example, the IVR provisioning/monitoring system 34 may be located elsewhere in the telecommunications network 10 such as at a signal control point (or "SCP") (not shown).--

On page 32, lines 12–24, please replace the paragraph in its entirety to read:

--It is contemplated that a wide variety of techniques may be used to monitor and detect an event occurring within the switch. As disclosed herein, the term "event" refers to the occurrence of an operating condition previously determined as necessitating transmission of data to the expert system module & 38 for analysis. Events may be defined differently for various devices depending on the sophistication thereof. For example, a relatively simple hardware device such as a temperature monitor may determine an event as the monitored temperature after expiration of a selected time period. Sophisticated hardware devices, on the other hand, may be configured such that an event is defined as an operating condition or change in the operating condition outside of a specified parameter. For example, a temperature above 30 degrees Centigrade or a rate of temperature change exceeding more than 5 degrees per hour may indicate the occurrence of an event.--

On page 34, lines 1–14, please replace the paragraph in its entirety to read:

--Proceeding on to step 90, upon receipt of a notification of an event by the expert system module 38, the method then determines the appropriate response to the event. In the embodiment of the invention disclosed herein, it is contemplated that the response to a receipt of

a notification of the occurrence of an event, the expert system module 38 determines whether to proceed to step 92 to issue an alert or may proceed to step 99 where, rather than generating an audible alert, the event is merely entered in one ~~or~~ of the logs maintained by the expert system module 38. Of course, it should be readily appreciated that a wide variety of responses or combinations thereof may be initiated by the expert system module 38 in response to receipt of a notification of the occurrence of an event. For example, one such response may be the initiation of corrective action by the expert system module 38 generating commands for transmission to various ones of the HW component 28, the SW component 30 and the CALLP module 32.--

On page 35, lines 6–20, please replace the paragraph in its entirety to read:

--If, after consulting the rules table ~~[[40]]~~ 44, the expert system module 38 determines that an update to one or more logs at step 99 is the appropriate response, event handling is completed and the method returns to step 86 to await detection of a next event or a command to exit the monitoring mode. If, however, the expert system module 38 determines that the issuance of an alert at step 92 is the appropriate response to the monitored event, an audibilized alert is generated at step 94 by the expert system module generating an alert command, typically, by identifying alert type associated with the rule from the rules table resulting in issuance of the alert and transmitting the alert type to the voice generation module 40. In turn the voice generation module 40 would check the output audibilization table 46 for an audibilized message associated with the alert type received from the expert system module 38. The voice generation module 40 would then transmit the digitized audibilized message to the human interface 47 where the message is used to generate audible sound in the manner previously described.--

On page 39, line 16 – page 40, line 6, please replace the paragraph in its entirety to read:

--Referring next to Fig. 4, a network level IVR provisioning/monitoring system similarly configured to the switching device level IVR provisioning/monitoring system of Fig. 2 will now be described in greater detail. As disclosed herein, the originating and/or destination terminals may include voice terminals 108-1, 108-2, facsimile machines 106-1, 106-2 and data terminals ~~1220-1~~ 110-1, 110-2, all of which are coupled to IP network 104 via PSTN 102 and gateways 112-1, 112-2. Other voice and facsimile terminals 114-1, 114-2, 116-1, ~~116-23~~ 116-2 are

directly coupled to the IP network 104 via a gateway 119-1, 119-2. Private branch exchanges (or “PBXs”), here representatively illustrated by PBX 118-1, 118-2 are also directly coupled to the IP network 104 via the gateways 119-1, 119-2, but typically include plural voice, facsimile and data terminals (not shown in Fig. 4) coupled to the PBX 118-1, 118-2. Finally, IP terminals such as IP voice terminals 124-1, 124-2 and associated IP data terminals 126-1, 126-2 and IP protocol PBXs 122-1, 122-2 (and any terminals, for example, voice terminals 120-1, 120-2 coupled thereto) are all directly coupled to the IP network 104.--